

Application No. 10/826,148
Amendment Dated December 26, 2006
Reply to Office Action Dated September 25, 2006

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-4. (cancelled)

5. (currently amended) Process for the production of a superconducting cable having a single cable core, which contains at least one elongated superconducting element, and a flexible tube, which surrounds the cable core, said process comprising the steps of:

- (a) continuously pulling the single cable core from a supply unit;
- (b) continuously pulling a metal strip from a strip supply unit;
- (c) continuously forming a slotted tube around the cable core with the metal strip to form a slotted tube; welding a longitudinal slot of the slotted tube shut; corrugating the welded tube with the cable core inside the tube, where the inside diameter of the corrugated tube is larger than the outside diameter of the cable core to form a semi-finished superconducting cable;
- (d) winding the semi-finished superconducting cable in at least one turn on a cable drum; and
- (e) mechanically joining the ends of the cable core to the ends of the corrugated

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tube while the cable is on the cable drum ~~or is lying in at least one turn.~~

6. (previously presented) Process according to Claim 5, wherein the forming of the metal strip into a tube or the corrugation of the welded metal tube is carried out in such a way that the cable core has an excess length Δl in the corrugated metal tube, which is calculated according to the formula $\Delta l = (R - r)\pi \times 2a$, where R is the inner radius of the corrugated tube, r the outer radius of the cable core, and a the number of turns.

7. (previously presented) Process according to Claim 5, wherein the excess length Δl is more than 0.25% of the original length of the cable core.

8. (previously presented) Process according to Claim 5, wherein the cable core contains a high-temperature superconductor.